CLAIMS

1. A polishing apparatus comprising:

a polishing table having a polishing surface thereon;

a top ring for pressing a workpiece against said polishing surface, said top ring having a housing and a retainer ring vertically movable in said housing for holding an outer circumferential edge of the workpiece;

a vertically moving mechanism operable to vertically move said top ring;

a bracket vertically movable together with said top ring;

a stopper adjustable in vertical position to prevent downward movement of said bracket;

a sensor for detecting a distance between said stopper and said bracket; and

a control unit operable to adjust said stopper in vertical position when said retainer ring is brought into contact with said polishing surface while a lower surface of said housing of said top ring is located at a predetermined height from said polishing surface so that the distance between said stopper and said bracket is equal to a difference between a height of the lower surface of said housing from said polishing surface at the time of polishing and said predetermined height.

2. The polishing apparatus according to claim 1, wherein the predetermined height is defined as a height of said housing above said polishing surface when said housing is moved to an uppermost position with respect to said retainer ring.

3. A polishing apparatus comprising:

a polishing table having a polishing surface thereon;

a top ring for pressing a workpiece against said polishing surface, said top ring having a retainer ring for holding an outer circumferential edge of the workpiece and a vertically movable chucking plate to hold the workpiece on a lower surface thereof;

a vertically moving mechanism operable to vertically move said top ring;

a bracket vertically movable together with said top ring;

a stopper adjustable in vertical position to prevent downward movement of said bracket;

a sensor for detecting a distance between said stopper and said bracket; and

a control unit operable to adjust said stopper in vertical position when the workpiece held on the lower surface of said vertically movable chucking plate is brought into contact with said polishing surface while a lower surface of said retainer ring of said top ring is located at a predetermined height from said polishing surface so that the distance between said stopper and said bracket is equal to a difference between a height of the lower surface of said retainer ring from said polishing surface at the time of polishing and said predetermined height.

4. The polishing apparatus according to claim 3, wherein the predetermined height is defined as a height of said retainer ring above said polishing surface when said retainer ring is moved to an uppermost position with respect to said chucking plate.

5. A polishing apparatus comprising:

a polishing table having a polishing surface attached thereon;

a top ring for pressing a workpiece against said polishing surface;

a vertically moving mechanism operable to vertically move said top ring;

a bracket vertically movable together with said top ring;

a stopper adjustable in vertical position to prevent downward movement of said bracket; and

a control unit operable to adjust said stopper in vertical position.

6. A polishing apparatus comprising:

a polishing table having a polishing surface thereon;

a top ring for pressing a workpiece against said polishing surface, said top ring having a housing and a retainer ring vertically movable in said housing for holding an outer circumferential edge of the workpiece;

a vertically moving mechanism operable to vertically move said top ring;

a bracket vertically movable together with said top ring;

a stopper adjustable in vertical position to prevent downward movement of said bracket;

a sensor for detecting a distance between said stopper and said bracket; and

a control unit operable to adjust said stopper in vertical position based on a distance signal from said sensor.

7. A method of adjusting a polishing apparatus, said method comprising:

bringing a retainer ring, which is vertically movable in a housing of a top ring, into contact with a polishing surface while locating a lower surface of the housing of the top ring at a predetermined height from the polishing surface;

detecting a distance between a bracket, which is vertically movable together with the top ring, and a stopper, which is adjustable in vertical position to prevent downward movement of the bracket; and

adjusting the stopper in vertical position so that the distance between the bracket and the stopper is equal to a difference between a height of the lower surface of the housing from the polishing surface at the time of polishing and the predetermined height.

8. The method according to claim 7, wherein the predetermined height is defined as a height of the housing above the polishing surface when the housing is moved to an uppermost position with respect to the retainer ring.

9. A method of adjusting a polishing apparatus, said method comprising:

holding a workpiece on a lower surface of a vertically movable chucking plate of a top ring;

bringing the workpiece held on the lower surface of the vertically movable chucking plate into contact with a polishing surface while locating a lower surface of a retainer ring of a top ring, which holds an outer circumferential edge of the workpiece, at a predetermined height from the polishing surface;

detecting a distance between a bracket, which is vertically movable together with the top ring, and a stopper, which is adjustable in vertical position to prevent downward movement of the bracket; and

adjusting the stopper in vertical position so that the distance between the bracket and the stopper is equal to a difference between a height of the lower surface of the retainer ring from the polishing surface at the time of polishing and the predetermined height.

10. The method according to claim 9, wherein the predetermined height is defined as a height of the retainer ring above the polishing surface when the retainer ring is moved to an uppermost position with respect to the vertically movable chucking plate.